AWARENESS, PROTECTIVE BEHAVIOUR, AND DISCLOSURE OF HIV-RESULT AMONG MOTHERS WITH KNOWN HIV-SEROSTATUS IN MOSHI, TANZANIA

-a student elective

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Abstract

This study aims to look into the level of awareness and knowledge on STI's (HIV in particular), risk-perception and protective behaviour, and disclosure of HIV test results, in a community severely hit by the HIV-epidemic.
67 women, of them 15 (22,4%) HIV-positive, were interviewed in Kiswahili language, using a structured questionnaire. The interviews took place at two health clinics in Moshi, Tanzania, when the women came for follow-up of their lastborn child.
8,8 % of the population in Tanzania are infected by HIV, figuring as a number 11 of countries with the highest HIV prevalence. Women have a slightly higher HIV-prevalence than men, 56%.
More than half of the women (56,1%) reported no monthly income. The great majority, 86,4 %, were currently cohabiting or married.
Analysis shows that the level of awareness (100%) and knowledge of HIV is high. Less than half of the women (42,3%) perceive themselves at risk of being infected with HIV. Even among those feeling at risk, behavioural change, such as condom use, is still not seen. A high proportion of women (67%) find it difficult to even suggest the use of condoms. Disclosure rates are high (88,1%), but seropositive women are less likely to disclose their HIV-status (66,7%). HIV-positives report a higher number of lifetime sexual partners (p-value 0,003), and have more children (p-value 0,041) than HIV-negatives. Positive HIV-serostatus and increasing age is associated (p-value 0,003). HIV-positives were more likely to be single (p-value 0,000), and not living with the father of the child enrolled in the study (p-value 0,000).

Introduction

The aim of the elective is to give the students a possibility to focus on a topic of their interest, over a three month period. I had heard of students going to East Africa, and it caught my interest. Living and studying in Norway, ranked repeatedly among the top three countries on the quality of life statistics, undoubtedly provides a pretty sheltered reality. Together with two fellow students, Fride Efjestad and Ragnhild Gulsvik, I went to see Babill Stray-Pedersen, department of Obstetrics and Gynaechology at Rikshospitalet. We discussed various topics, and finally decided to focus on various aspects of HIV. B. Stray-Pedersen had projects running in Zimbabwe and Tanzania, and due to the unstable situation in Zimbabwe, we opted for Tanzania.

B. Stray-Pedersen put us in contact with Dr. Sia E. Msuya, who since January 2002 has conducted a PhD study at antenatal clinics in Moshi, with B. Stray-Pedersen as a supervisor. 2654 women, of them 7 % HIV positive, and their infants have been enrolled. The main aims of S. Msuya's study have been to 1)Evaluate the effects of single dose Nevirapine given at birth to mother and infant on cognitive motor development 2)Assess if maternal micro nutritional levels have an effect on MTCT 3)To determine risk factors for perinatal transmission of HIV-1 in infants despite treatment with Nevirapine and 4)To assess the effects of extensive couple counselling and treatment on RTIs on the incidence of HIV during the postnatal period.
Women have been interviewed using a structured questionnaire. Those with STIs have been treated. HIV-positives have received Nevirapine treatment. Mothers and their infants have been followed up at 4 weeks post delivery, and then every 3 months for eighteen months.

I decided to spend the 6 weeks available for the elective in 8th semester in Moshi, collecting data. S. Msuya, working on her PhD, was at the time still in Moshi, and would work as my supervisor during my stay in Tanzania. I travelled together with two fellow students. Before leaving Norway we followed an introduction course in Kiswahili language.

The time estimated for the elective is quite limited, and in discussion with both S. Msuya and B. Stray-Pedersen, we found that to achieve the most in the time available, the best idea would be to work in close relation to S. Msuya's study. We would focus on separate topics. I decided to make a questionnaire for a structured interview, based on parts of S. Msuya's questionnaire, with a few of my own additions.

Objectives

My main objectives would be 1)To explore the level of knowledge on STIs and how to prevent them, HIV in particular 2)Risk-perception and protective behaviour 3)To investigate disclosure of HIV test results: who chooses to disclose and not, why, and what consequences may follow.

Background

HIV was first discovered in 1981. More than 20 million have died from the virus, and today almost 40 million people are living with the virus. (UN press release 26/05/05) Africa has 14% of the world's population, but almost two thirds of the population affected by HIV. United Republic of Tanzania has 38 329 000 inhabitants, and of these 8,8 % are affected by

HIV, figuring as a number 11 of countries with the highest HIV prevalence. Women have a slightly higher incidence, 56%.

46,7% of the children are enrolled in primary school. The ratio of enrolment in secondary school (number of children of secondary school age enrolled in secondary school/total number of children of secondary school age) is 4,8. Female comprise 44,8 % of the children enrolled in secondary school (13).

A study from the Mwanza region (2004) looked into the quality of sexual partnerships reporting in rural Tanzania (10). Non-marital partnerships are most common among single. Among the married, men (40 %) were more likely to have a non-spousal sexual partner than the women (3 %). This study however, suggests that women, especially single, often under-report the number of sexual partners, whereas men, especially single, are more likely to exaggerate the number. For women, reported multiple sexual partners had a much stronger association to higher risk of contracting HIV than men, supporting the statement (10). Non-marital partnerships are less common in polygamous men (10).

20 percent of the population live in absolute poverty. 160 000 died from AIDS in 2003, making it the country with the fifth highest number of AIDS deaths in the world. 980 000 children are AIDS orphans. The life expectancy is 58 years, reduced by 12 years if affected by HIV. In comparison, life expectancy in Norway, with AIDS, is 79 years.

Various government measures have been introduced as a prevention strategy. Since one has not yet come up with a cure for the disease, prevention of transmission remains the main focus. According to UN, data on sexual behaviour and AIDS-related knowledge and attitudes are sparse and difficult to compare

Background data, objective 1: To explore the level of awareness, knowledge on STI's and how to prevent them, HIV in particular

The first HIV-cases in Tanzania were recorded in 1983, and HIV has since had a continuously increasing prevalence (7). In some regions however, as the Kagera region, which was one of the first affected regions in Tanzania, levels have declined in recent years (5). The level of awareness of AIDS is in general high in Africa, reported to be 97-99% in Tanzania (1). J. Lugalla et al. states that AIDS has touched almost every family in Sub-Saharan Africa, and has become more a reality than a distant threat (5). Education is always associated with greater awareness, but in countries with generally high awareness, education made little difference (1).

The quality of the knowledge about HIV improves with better education. Presented with the question "Can a healthy-looking person have AIDS" only 40% of those with no education responded yes, compared to 60% of those with primary school education, and 90% of those with secondary or higher (1). In a study by Jordan Harder et al (2004) from south-west Tanzania, 92,9 % knew that a mother could infect her unborn child (9).

The knowledge of ways to avoid getting AIDS has been reported to be limited. Men know more than women about STIs, and a demographic health survey from 1996 concluded that 36% of Tanzanian females knew of *no* ways to avoid getting AIDS (1). Limited number of sexual partners and condom use are the most frequently mentioned safe behaviours. In a study in the Mwanza region (2003), 23,7 % of the men had ever used a condom (6).

Background data, objective 2: Risk-perception and protective behaviour.

UN published a report in 2002 based on several national and demographic surveys (1). As mentioned, the HIV-prevalence in Tanzania is at 8,8 % of the population, placing them as number 11 in the countries with the most HIV. The awareness of HIV is also high, 97-99% (1). Women have a higher risk perception than men (1). In Kenya, Tanzanias neighbouring country, with a similar HIV-prevalence (6,7%) (2), a little more than 30% thought they had no risk at all of getting HIV. In a study by Norman from 2003 with data from 4293 women in Kenya, Tanzania and Trinidad, almost two-thirds (65,7%) perceived various degrees of risk of acquiring HIV (4). In this sample, 58,7 % had requested condom use with their most recent sex partner. However, only 19% reported condom use with this partner to be consistent. This study concludes that levels of consistent condom use are low despite the high percentage perceiving risk of HIV. Norman stresses the fact that prevention programmes must also be addressed to persons in spousal relationships, as women reporting only one sexual partner have increasing HIV-prevalence.

An article by Seip R, (14), look into the fact that globally more women than men are infected by HIV. She states that a reason to this is women's in general lack of control regarding their own sexual behaviour: "Women cannot discuss sexuality with their spouses; neither can they demand the use of condoms or HIV testing".

Previous reports have suggested that education has not made a change in risk perception (1). In a study from 2002, Bowser argues that perceiving risk of HIV does not necessarily lead to a behavioural change (8). He divides the awareness into different stages, which increasingly affect and increase the perception of risk of getting infected, leading to a change in risk behaviour. Awareness and knowledge often makes no difference, but if you encounter infected people in the community, many become worrisome. The worry increase, and behavioural change becomes widespread, when infected people die. The conclusion is that change of behaviour is a social process, where introduction of new community norms means more than increased knowledge at an individual level (8).

In my study, I will look at the general risk perception among the women. I will try to see if there is any relation between risk perception and knowing someone affected by the virus, and see if the closeness of the relation makes any difference. I will also look into whether age, religion, marital status, number of sexual partners seems to make a difference. Does the statement that knowledge does not affect risk perception apply to my population?
I will also see if those with a higher risk perception are more likely to use a condom.

Background data, objective 3: Disclosure of HIV test results: who chooses to disclose and not, why, and what consequences may follow

Suspicions of AIDS can lead to associations with promiscuity. According to a report written by C. Bledsoe, based upon material from the African media, the partner who falls sick is often accused of having brought the disease (3). Traditionally, women are more so expected to restrict themselves to one partner than males (3). Media often identifies women as "most at fault for spreading the disease to their partners" (3). In some regions, this can be due to a gender inequality in HIV-prevalence, as in the Kagera region, where more women are infected (8). A study from the Mwanza region (2003) showed the HIV prevalence among women to be 1,4-1,6 times higher than men (6).

Antelman et al conducted a study examining predictors for positive HIV-serostatus disclosure in Dar es Salaam in 2001 (11). Here they found that women were less likely to disclose to their partners if they had a low income, were cohabiting, or reported ever-use of a modern contraceptive method. A lower lifetime number of sexual partners was associated with higher disclosure rates. Only 40 % disclosed the result, giving reasons such as fear of loss of confidentiality (32%), social isolation (14%), not wanting to worry others (17%) and fear of conflict with their partner (15%). This is supported by a study published in AIDS care in 2001 (12). Divorce and separation, traditionally not culturally accepted, is increasingly common due to HIV/AIDS (5). Antelman et al. concluded that women who did not disclose might suffer lack of support, and limited ability to engage in preventive behaviour (11). A study by Grinstead et al. conducted in Kenya, Tanzania and Trinidad, showed associations between disclosure of positive serostatus and break-up of marriages, being neglected or disowned by their own family, and increased support from health professionals (15). For all other than the HIV-positives, disclosure had an association with strengthening of a sexual relationship.

A recent study from the Kagera region (2004), reports that people affected by AIDS talk more openly about their situation nowadays (8). An increasing number wished to get testing and counselling for HIV, and there were several pre-and post-test clubs in the area. Maman S (AIDS Care 2001) lists perception of personal risk of HIV as the major factor driving women to overcome barriers to HIV-testing (12).

Methods

The area

This study was carried out in Moshi, located in the Kilimanjaro region. According to the 2002 National Population Census, the Moshi district holds a population of 401 369, where 9355 live in the urban area. The female proportion is about 52%. Due to its proximity to Mt Kilimanjaro, the highest point in Africa, the city has for a long period been a base for travellers to and from the mountain. The area is famous for its coffee growing, and is a major educational centre. About 40-45% of the population are Christian, whereas 35-40% practice Islam. The rest of the population adhere to traditional beliefs, most of which centre around ancestor worship and nature-based animism.

Health care facilities

In the Moshi area there are about eight health clinics, supported by the government. The clinics act as the general first-line health care service. When needed, patients are referred on to Mawenzi district hospital, then KCMC. KCMC (Kilimanjaro Christian Medical Centre) is a referral hospital for over 11 million people in Northern Tanzania.

For the study, two of clinics where selected; Madjengo and Pasoa. They where chosen due to their large number of attendance, and the fact that they are the only ones providing all of the following services: antenatal care, delivery facilities, postnatal care and child monitoring. The attendance to antenatal care clinics in the Moshi urban area is very high.

Population

The population comprised women selected for a M-T-C-T study by S. Msuya since 2002 and onwards. Women in their 3rd semester of pregnancy attending antenatal care at the two mentioned clinics, were approached and asked if they wanted to participate in the study. Women were enrolled provided they met three criteria; 1) Residing in the Moshi area 2) Attending care at the antenatal clinics 3) Planning to deliver at one of the district hospitals. Altogether 2654 women were included, among them 7% HIV-positives.

Women attending the clinics for the follow-up were interviewed. All women consenting to participate, were interviewed. Besides the day-to-day clinic work, interviews were also performed on one evening clinic for HIV-positives only. 67 women, of them 22,4 % (n=15) HIV-positive, were included.

The interviews

This study is based on in-depth structured interviews. The questionnaire had a background section monitoring age, economy (based on reported income and reported material possessions) marital status and duration, lifetime number of partners, and finally number and age of children.

The women were asked several questions regarding knowledge on STIs, HIV in particular. Knowledge of anyone affected by the disease, as well as risk perception and risk behaviours for HIV was investigated. As a part of S. Msuyas study, the women and their spouses were

offered HIV-testing. Information concerning HIV-testing and disclosure of the results was collected. Questions regarding contraceptive use, focusing on condoms, and reproductive behaviour, were also asked.

Most of the questions had listed alternatives. For some, the options were obvious (yes/no-questions), for others they were listed (i.e. "Do you possess any of the following?"), and yet for other questions (open ended questions) the alternatives were not prompted (i.e. "Do you know of any STIs?"). Some of the questions where of an open type, allowing for the women to expand on a certain subject (i.e. "Do you think knowing that you are HIV-positive has made a big change in your life?"). Altogether, 36 questions were asked, each interview lasting about 20 minutes.

The women were interviewed in Kiswahili language. The questionnaire was first developed in English, and then translated to Kiswahili language. As my own knowledge of Kiswahili is limited, I was helped translating the questionnaire beforehand by S. Msuya. During the major part of the interviews, I was accompanied by different local nurses speaking Kiswahili helping me translate. Language did pose a significant barrier, especially in the open-ended questions, as the translators were not fluent in English. The structured questions were more reliable, and analysis is therefore mainly built on answers to these. Due to limited personnel, and my increasing ability to perform the interview, in the end I performed some on my own.

Laboratory methods

The HIV-testing was performed on site using two rapid tests, Determine HIV-1/2 test (Abbott Laboratories) and Capillus HIV1/HIV2 (Trinity Biotech, Ireland). If both tests were positive, HIV was diagnosed. In the case of disconcordance, a third test was used: ELISA, Virinostika HIV Uni-form II (Organon Teknika, Boxtel, Netherlands).

The analysis of the data

Analysis of the data was performed using SPSS. First, the population in general is described. All questions are based upon literature found prior to the data collection. Analysis has been done to see if the background information is consistent with the answers given. Cross tables have been used to describe the associations between HIV with knowledge and perception of risk, HIV status with risk perception and protective behaviour and lastly if there was any association between HIV status and disclosure patterns. Chi-square and Fishers exact tests were used. $P<0,05$ was considered statistically significant. Some of the responses from the open questions will also be presented.

Ethics

The ongoing study already had ethical clearance from the Tanzanian Ministry of Health and the Norwegian Ethical Committee.

Results

Part one –Demographics

Table 1. Demographic characteristics of the women

Predictor	Total number (%)	Within HIV-positive-group number (%)	Within HIV-negative group number (%)	p-value
Age	n=67	n=15	n=52	0,003
Less than 25 years	27 (40,3%)	1 (6,7%)	26 (50%)	
25 years and older	40(59,7%)	14 (93,3%)	26 (50%)	
Education	n=67	n=15	n=52	n.s.
Primary school or less	66 (98,5%)	15 (100%)	51 (98,1%)	
Secondary school or higher	1 (1,5%)	0 (0%)	1 (1,9%)	
Income per month, women	n=66	n=15	n=51	0,021
None	37 (56,1%)	4 (26,7%)	33 (64,7%)	
<10 000 TSH (<approx 100 NOK)	13 (19,7%)	6 (40%)	7 (13,7%)	
>10 000 TSH (>approx 100 NOK)	16 (24,2%)	5 (33,3%)	11 (21,6%)	
Religion	n=67	n=15	n=52	0,005
Christian	32 (47,8%)	12 (80%)	20 (38,5%)	
Muslim	35 (52,2%)	3 (20%)	32 (61,5%)	
Marital status	n=66	n=14	n=52	0,000
Single	9 (13,6%)	7 (50%)	2 (3,8%)	
Cohabiting	10 (15,2%)	4 (28,6%)	6 (11,5%)	
Married	47 (71,2%)	3 (21,4%)	44 (84,6%)	
Duration of relationship	n=58	n=8	n=50	n.s.
Less than one year	3 (5,2%)	0 (0%)	3 (6%)	
1-5 years	24 (41,4%)	5 (62,5%)	19 (38%)	
More than five years	31 (53,4%)	3 (37,5%)	28 (56%)	
Number of children	n=66	n=15	n=51	0,041
1	24 (36,4%)	3 (20%)	21 (41,2%)	
2	17 (25,8%)	3 (20%)	14 (27,5%)	
3	12 (18,2%)	2 (13,3%)	10 (19,6%)	
4 or more	13 (19,7%)	7 (46,7%)	6 (11,8%)	
Reported lifetime number of sexual partners	n=65	n=13	n=52	0,003
1	44 (67,7%)	4 (30,8%)	40 (76,9%)	
2 or more	21 (32,3%)	9 (69,2%)	12 (23,1%)	

Table 1 presents the univariate frequency and percentage distribution for relevant demographic characteristics. Among the sample, 22,4 % (n=15) were diagnosed HIV-positive. Column one presents the distribution in the sample as a whole, whereas column two and three shows the results within the HIV-positive and HIV-negative group respectively.
For each demographic characteristic and in each subgroup, the n is listed. This represents the number of respondents to that question. The n total is 67; among the HIV-positives 15, and HIV-negatives 52. Missing values may be due to the woman not knowing the answer (i.e. partners income), her choosing not to answer, or the question not being applicable for her (i.e. single women asked the duration of their relationship). Percentage values and p-value calculations are based on the respondents (i.e. missing values are excluded).
The p-value represents the calculation of significance of each variable's correlation to HIV-status.

The age was evenly distributed, with 40,3 % (n=27) being under the age of 25. 98,5% (n=66) had only a primary level of education or less.
Among the women, more than half (56,1%) reported no monthly income. 43 knew the approximate income of their partner. Whereas only 24,2% (n=16) of the women had an income above 10 000 TSH, the corresponding percentage for men was 86 (n=37). Only 2,3 % (n=1) of the men reported no income.
A great majority, 86,4 % (n=57), of the sample were currently in a relationship; 71,2 % (n=47) married and 15,2 % (n=10) cohabiting. Only 2,3 % of the relationships (n=3) had a duration of less than a year, with a slight majority lasting more than five years. Most women (67,7%) reported having had only one sexual partner.
The number of living children the women had varied; about one fourth had one child, but almost one fifth had 4 children or more.

Among the HIV-positive, a significant correlation to increasing age was found (p=0,003). In the younger adults group (less than 25 years) only 3,7% were sero-positive, whilst among those above 25 years 35 % had HIV. The great majority (93,3%) of the HIV-positive were 25 years or older. For the sero-negatives, age was symmetrically distributed under and above 25.
Education did not prove to be a significant predictor, but in the sample, only one of the 66 women had education above primary school level.
For reported monthly income, the HIV-positives were more likely to have an income than the HIV-negatives (p=0,021). Among the HIV-negative, 64,7 % (n=33) reported no monthly income, but in the HIV-positive group, only 26,7 % (n=4) did so.
A significantly larger proportion (p=0,005) of the HIV-positives are Christian (37,5%) to Muslims (8,6%). 80% (n=12) of the HIV-positives were Christian. For the HIV-negatives, a slight majority, 61,5 % (n=32) were Muslims. Cross analysis of reported number of sexual partners and religion showed a significant correlation (p-value 0,033). The majority (80,0%) of the Muslims reported only one partner. For Christians, there was an even 53,3/47,7 % distribution one partner/2 or more.

Marital status was highly correlated to HIV-status (p=0,000). 50% of the HIV-positives reported to be single. A striking 77,8% (n=7) of the single women were HIV-positive, whilst among the married women they comprised only 6,4%. For the HIV-negative, 86,2 % (n=50) were either cohabiting or married. Duration of the relationship did not prove to be significantly influenced by HIV-status. Cross-analysis of marital status and reported lifetime number of sexual partners was highly significant (0,001); whereas 89,7% of the single women reported more than one sexual partner, only 19,1% of the married women did so.
HIV-positives reported more children and a higher lifetime number of sexual partners than the negatives. However, just as there was a correlation between HIV-status and age, there was also a significant correlation between a higher reported lifetime number of sexual partners and increasing age, p-value 0,011 (table 2).

Table 2. Crossanalysis, Age and lifetime number of sexual partners

		Reported lifetime number of sexual partners (% within age)		
		1	2 or more	Total
Age	Less than 25 years	23 (85,2)	4 (14,8)	27 (100%)
	25 years and older	21 (55,3)	17 (44,7)	38 (100%)
				65

To sum up, the HIV-positive woman was likely to be above 25 years of age with a Christian belief. She had a monthly income. She was as likely to be in a relationship as not, and had probably had more than one sexual partner. Almost half had four children or more.

Part two –Awareness and knowledge on STIs, HIV in particular

Table 3. Knowledge about HIV

Item	*Number*	*Percent*
Spontaneous mention of…	n=67	
HIV	54	80,6
Any other STI	61	91
If HIV not mentioned spontaneously…	n=13	
Have heard of HIV	9	100
Knowledge of preventive methods	n=67	
None	5	7,5
Consistent condom use	54	80,6
Having only one partner	32	47,8
Other		
Know HIV has asymptomatic period	n=67	
Yes	64	95,5
No	3	4,5
Knowledge of MTCT	n=67	
Yes	64	95,5
No/Don't know	3	4,5
Sources of information about HIV		
Radio	67	100
Other media	64	95,5
Friends	56	83,6
Family	58	86,6
Other	66	98,5
Know person infected by HIV	n=67	
Yes	52	77,6
No	15	22,4
Has relative infected by HIV	n=67	
Yes	29	43,3
-close relative (siblings, parents)	12	17,9
-more distant relative	17	25,4
No	38	56,7

Close relatives: siblings, parents
Other relatives: grandparents, aunts, uncles, cousins, brothers and sisters in law

Table 3 presents the univariate frequency and percentage of different variables reflecting knowledge on STI's, HIV in particular.
The awareness of HIV in the sample is high. 80,6 % (n=54) mentioned the disease when asked if they knew of any sexually transmitted diseases. Among those who did not mention HIV spontaneously, all responded yes when asked if they had ever heard of HIV.
The women were asked to list ways to avoid getting STI's. Only 7,5% (n=5) knew of no methods. Condom (80,6 %, n=54) and having only one sexual partner (47,8%, n=32) were the most frequently mentioned safe behaviours.
To check the quality of the knowledge, the women were asked two questions about HIV: "Do you think a person can look healthy and be infected with HIV/have AIDS" and "Do you think an HIV-positive mother can pass HIV on to her baby during pregnancy/ delivery/ breastfeeding". The great majority responded correctly, in both cases 95,5% (n=64).
The women had multiple sources for their knowledge. All had heard about HIV on the radio (100%, n=67), but other media (95,5%, n=64), friends (83,6 %, n=56), family (86,6 %, n=58) and other (98,5%, n=66) also proved to be important sources of information.

To see if the women had to relate to the disease on a more personal level, they were asked if they met HIV-affected people in their daily life. Did they know anyone affected by the disease, and if so, were they in a close family relation to them? Most women (77,6%) knew someone affected by the disease. A striking 43,3% (n=29) had HIV-infected family members. For 17,9 % (n=12), the affected family member was either a sibling or parents.

To check if there were any differences in knowledge between HIV-positives and HIV-negatives, cross-analysis was done. No significant correlations were found. In the table below the results for mention of STIs and preventive methods are listed.

Table 4. Knowledge about HIV, comparing HIV positive and negative

Predictor	No total	No HIV-positive	% HIV-positive	% within HIV+ group	p-value
Number of STIs mentioned spontaneously	n=67	n=15			n.s.
2 or less	24	5	20,8	33,3	
3 or more	43	10	23,3	66,7	
Number of ways to avoid STDs mentioned	n=67	n=15			n.s.
2 or less	26	7	26,9	46,7	
3 or more	41	8	19,5	53,3	

Predictors of knowledge

Knowledge of preventive methods was used as a parameter to look for predictors for knowledge on STIs (table 5). Only "Know HIV has an asymptomatic period", proved to be a significant predictor. Among those who knew HIV can be asymptomatic, 84,4% (n=64) mentioned condom, as opposed to none among those who did not know this (n=3), thus making the women who were aware of the asymptomatic phase more likely to mention condom use as a preventive method.
For the other predictors analysed, none had a correlation that proved to be statistically significant. A slightly higher proportion of HIV-positives (93,3%, n=14) compared to 76,9 % among the HIV-negatives (n=40) mentioned condom. More mentioned condom in the age group above 25 years. With increasing income came an increasing proportion mentioning condom.
When looking into marital status and duration of the relationship, those who were single, or in a relationship of shorter duration, would more often list condom use as a preventive method. It could also seem as those with a higher number of lifetime sexual partners, were more likely to mention condom. A higher proportion of those not mentioning condom did not know of anyone affected by HIV.

Table 5. Predictors of knowledge of preventive methods

Predictor	No total	Mention condom number	Mention condom percent	p-value
HIV-status				n.s.
Positive	15	14	93,3	
Negative	52	40	76,9	
Age				n.s.
Less than 25 years	27	20	74,1	
25 years and older	40	34	85	
Education				n.s.
Primary school or less	66	53	80,3	
Secondary school or higher	1	1	100	
Income per month, women				n.s.
None	37	27	73	
<10 000 TSH (<approx 100 NOK)	13	11	84,6	
>10 000 TSH (>approx 100 NOK)	16	15	93,8	
Marital status				n.s.
Single	9	8	88,9	
Cohabiting	10	8	80	
Married	47	37	78,7	
Duration of relationship				n.s.
Less than one year	3	3	100	
1-5 years	24	18	75	
More than five years	31	25	80,6	
Reported lifetime number of sexual partners				n.s.
1	44	34	77,3	
2	14	12	85,7	
3	4	4	100	
4 or more	3	2	66,7	
Know HIV has asymptomatic period				0,006
Yes	64	54	84,4	
No	3	0	0	
Know person infected by HIV				n.s.
Yes	52	41	78,8	
No	15	13	86,7	
Has relative infected by HIV				n.s.
Yes	29	21	72,4	
No	38	33	86,8	

Part three - Risk-perception and protective behaviour

Table 6. Perceived risk of being infected with HIV

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	No, no risk at all	26	38,8	50	50
	Yes, small risk	11	16,4	21,1	71,2
	Yes, moderate risk	4	6	7,7	78,8
	Yes, great risk	7	10,4	13,5	92,3
	Don't know	4	6	7,7	100
	Total	**52**	**77,6**	**100**	
Missing	Not applicable	15	22,4		
Total		67	100		

All HIV-negative women (n=52) were asked if they perceived themselves at risk of being infected with HIV (table 6). Among the sample, 50 % (n=26) did not feel at risk at all, whilst 42,3 % (n=22) reported various degrees of risk perception.
The women were also asked to state a reason for their answer (table 7). This was asked as an open-ended question, but to make analysis possible, the answers were later categorized. Most reasons given reflected whether they trusted their husbands to be faithful or not, putting the women themselves in a passive situation as far as risk behaviour goes.

Table 7. Reasons for perceiving risk of being infected with HIV

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	Doesn't trust husband	17	25,4	89,5	89,5
	Polygamous relationship	2	3	10,5	100
	Total	**19**	**28,4**	**100**	
Missing	Not applicable, HIV+	15	22,4		
	Not applicable, "no risk"	25	37,3		
	System	8	11,9		
	Total	48	71,6		
Total		67	100		

Amongst the reasons given for feeling at risk of being infected (n=19), 89,5 % (n=17) stated they did not trust their husbands. Living in a polygamous relationship also made some women feel at risk (10,5 %).

Table 8. Reasons for perceiving no risk of being infected with HIV

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	Trusts husband	8	11,9	44,4	44,4
	Has only one partner	2	3	11,1	55,6
	Tested negative on HIV test	4	6	22,2	77,8
	Several reasons	4	6	22,2	100
	Total	**18**	**26,9**	**100**	
Missing	Not applicable, HIV+	15	22,4		
	Not applicable, "at risk"	22	32,8		
	System	12	17,9		
	Total	49	73,1		
Total		67	100		

Of the 26 who did not perceive risk, 18 gave a reason for their answer (table 8). Trusting their spouse (44,4 %) was the most frequently given reason. Restriction to one sexual partner was

also mentioned (11,1 %). To some concern, 22,2 % (n=6) did not feel at risk because of negative HIV-test result.

Predictors

Table 9. Reasons for perceiving risk of being infected with HIV

Predictor	No total	Number feeling at risk of HIV	% feeling at risk	p-value
Age				0,04
Less than 25 years	23	7	30,4	
25 years and older	25	15	60	
Income per month, women				0,079
None	29	10	34,5	
<10 000 TSH (<approx 100 NOK)	7	4	57,1	
>10 000 TSH (>approx 100 NOK)	11	8	72,7	
Know person infected by HIV				0,011
Yes	38	21	55,3	
No	10	1	10	
Has relative infected by HIV				0,041
Yes	22	14	63,6	
No	26	8	36,4	

Cross-tabulations, to find out who might be more likely to feel at risk of being infected with HIV. Those answering "don't know" were excluded, i.e. only at those who stated an opinion were included in the analysis.
The older adults (25 years and older) were more likely to feel at risk (p=0,04). In this group, 60 % (n=15) expressed feeling at risk, compared to 30,4 % (n=7) in the lower age group. Knowing a person with HIV, both any person or a family member, significantly increased the proportion who felt at risk (p=0,011). There was also a tendency towards increased risk perception among those with higher income, but the p-value was not low enough to meet significance criteria (p=0,079).
Neither marital status, duration of the relationship nor whether partner had been tested for HIV seemed to make an influence. A higher proportion of those who had had more than one sexual partner felt at risk, 70% (n=7) compared to 39,5 % (n=15), but the correlation was not significant.

Consequences –risk perception

Did feeling at risk of HIV have any consequences? Were those feeling at risk more likely to know of preventive methods of STDs? And did they use condoms either more or less than the average? Any findings could be either suggesting they felt at risk due to a high risk behaviour, or that feeling at risk made them aware of and more likely to use preventive measures.

Analysis did not suggest any significant correlations. Those perceiving risk of HIV did not mention a higher number of preventive methods, but a higher proportion of those who felt at risk did mention condom, and had used it. A higher proportion, 58,3 % (n=14) found it difficult to suggest condom use. In the sample as a whole, 33,9% (n=19= found it difficult to suggest condoms in a stable relation.

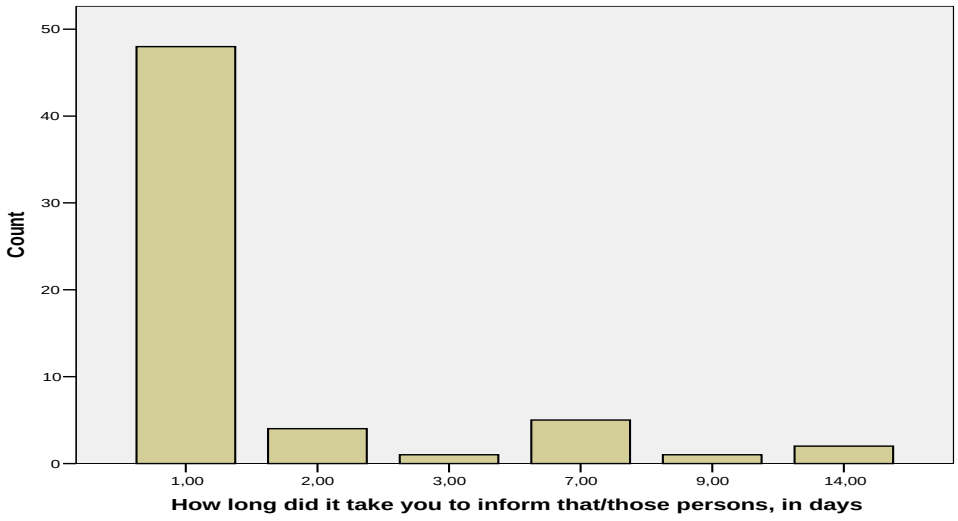
Part four -Disclosure of HIV test results

Table 11. Disclosure patterns

Item	Number	Percent
Time known HIV-status (months)		
less than 3	1	1,5
3 to 12	43	64,2
12 or more	23	34,3
HIV-result disclosed		
Yes	59	88,1
No	8	11,9

All women enrolled were tested for HIV. Most women (n=43, 64,2%) had known their HIV-status from 3-12 months (table 11). Among the sample, 88,1 % had chosen to disclose their result.
Among those who had informed someone, 83,6 (n=56) had informed their partner. There were no significant correlations between the time HIV-status had been known, and if they had disclosed or not.

Figure 1. Days from HIV-status known until disclosure



Most women disclosed the result the same day (78,7%, n=48). There was no significant correlation between HIV-status and how long it took the women to inform someone of the result.

Predictors

Table 12. Predictors of disclosure ("Have you informed anyone of your HIV-status")

Predictor	No total	Number disclosed	% disclosed	p-value
HIV-status				0,011
Positive	15	10	66,7	
Negative	52	49	94,2	
Age				n.s.
Less than 25 years	27	25	92,6	
25 years and older	40	34	85	
Religion				n.s.
Christian	32	27	84,4	
Muslim	35	32	91,4	
Income per month, women				n.s.
None	37	34	91,9	
<10 000 TSH (<approx 100 NOK)	13	11	84,6	
>10 000 TSH (>approx 100 NOK)	16	13	81,3	
Marital status				n.s.
Single	9	7	77,8	
Cohabiting	10	9	90	
Married	47	43	91,5	
Duration of relationship				n.s.
Less than one year	3	3	100	
1-5 years	24	21	87,5	
More than five years	31	28	90,3	
Has relative infected by HIV				n.s.
Yes	29	26	89,7	
No	38	33	86,8	
Has ever used a condom				0,021
Yes	24	18	75	
No	43	41	95,3	
Womans wish to have more children				n.s.
Yes	33	31	93,9	
No	33	27	81,8	
Don't know	1	1	100	
Partners wish to have more children				n.s.
Yes	36	34	92,4	
No	17	14	84,4	
Don't know	4	4	100	

As a predictor for disclosing, HIV-status was significant (p=0,011). Among the HIV-positive, 66,7 % had informed someone, whereas 94,2 % of the HIV-negative chose to do so. The HIV-positive comprised 62,5 % of the population who chose not to disclose. When looking at disclosure to *partner*, 80% of the HIV positive disclosed, in comparison to 84,6% among the HIV-negative, -there was no significant correlation. Reasons for not disclosing were asked. "It is my secret", said one HIV-positive woman, "It wouldn't solve anything" said another.

The choice to disclose or not was pretty evenly distributed throughout the different age groups, religious beliefs and income.

Neither the duration of the relationship or the marital status seemed to be an important predictor.

In the couples were either the man or the woman had a wish for more children, a higher percentage chose to share the HIV-result. Where the woman planned another baby, 93,9 % (n=31) chose to disclose, the corresponding value if it was the fathers wish to have another baby was 92,4% (n=34). Among those not planning more children, the disclosure rate was between 81,8 (women) and 84,4% (men). The correlation did however not prove to be statistically significant (p value 0,346-0,413).
Cross-analysis between disclosure and whether the woman had ever used a condom showed that among those who had never used a condom (n=43), almost all (95,3%, n=41) had disclosed. Only 75% (n=18) of those who *had* ever used a condom, shared the result. There was however no correlation to informing partner and condom use.

Consequences of disclosure

Table 13. Consequences of disclosure 1, -Partner HIV-tested

Have you informed your partner of your HIV-status			Has your partner come for testing Yes	No	Total
	Yes	Count	11	40	51
		% within info	21,6 %	78,4 %	100 %
		% within testing	91,7 %	80,0 %	82,3 %
		% of total	17,7 %	64,5 %	82,3 %
	No	Count	1	10	11
		% within info	9,1	90,9 %	100 %
		% within testing	8,3 %	20 %	17,7 %
		% of total	1,6 %	16,1 %	17,7 %
	Total	Count	12	50	62
		% within info	19,40 %	80,60 %	100 %
		% within testing	100 %	100 %	100 %
		% of total	19,40 %	80,60 %	100 %

Analysis to see whether the men were more likely to get tested if the women disclosed their HIV-result was done. Only one (9,1%) of the partners of the women who chose not to disclose (n=11) the HIV-result, came for HIV testing. For those who did disclose, 21,6% (n=12) of the men came for testing. The correlation was however not statistically significant.

Table 14. Consequences of disclosure, 1

HIV-status				Are you still living with the father of the current child? (cohab) Yes	No	Total
POSITIVE	Have you informed your partner of your HIV-status (info)	Yes	Number	5	7	12
			% within info	41,7	58,3	100
			% within cohab	71,4	87,5	80,0
			% of total	33,3	46,7	80,0
		No	Number	2	1	3
			% within info	66,7	33,3	100
			% within cohab	28,6	12,5	20,0
			% of total	13,3	6,7	20,0
	Total		Number	7	8	15
			% within info	46,7	53,3	100
			% within cohab	100	100	100
			% of total	46,7	53,3	100
NEGATIVE	Have you informed anyone of your HIV-status (info)	Yes	Number	42	2	44
			% within info	95,5	4,5	100
			% within cohab	84,0	100	84,6
			% of total	80,8	3,8	84,6
		No	Number	8	0	8
			% within info	100	0	100
			% within cohab	16,0	0	15,4
			% of total	15,4	0	15,4
	Total		Number	50	2	52
			% within info	96,2	3,8	100
			% within cohab	100	100	100
			% of total	96,2	3,8	100

Cross-analysis to look for a possible correlation between HIV-status, disclosure, and whether the woman was still living with the father of the current child was done. Among the HIV-positive, 12 out of 15 had chosen to share result with their partner. Of those, 58,3 % (n=7) were no longer living with the father of the child enrolled in the study. 7 HIV-positive had chosen not to share the result, but also among those, a relatively high percentage were not living with the father of the child, 33,3% (n=1).
Almost all HIV-negatives had informed their partner (84,6%, n=44). The great majority, 95,5 % (n=42) were still living with the father. Among those who had not shared the HIV result, and were negative, 100% (n=8) still lived together. When I cross-analysed HIV-status and whether the mother was still living together with the father, the correlation was highly significant (0,000).
When cross-analysis of HIV-status/disclosure of HIV-result to partner and still living with father of the current child/ disclosure of HIV-result to partner was done, neither relation proved to be significantly correlated.

Discussion

Demographics

The HIV-prevalence in the sample is 15,8%, approximately the double of the official figures for HIV in Tanzania. Among the 67 women interviewed, 15 were HIV-positive. This number does however not reflect the actual HIV-prevalence in the region, as I was actively including HIV-positive women, thereby achieving a high enough proportion of HIV-positives for comparative analysis to be made.

Only one (1,5%) had education above primary school level. This is a relatively low number compared to the national enrolment ratio of 4,8, and could affect the results.

The age was pretty evenly distributed, 40,3% under and 59,7% above the age of 25. In the HIV-positive group however, 93,3% were above the age of 25. One could think of many possible reasons to this. Cross-analysis showed a strong correlation between increasing age and increased number of sexual partners. Accepting this correlation, one could think that with increased age and consequently increasing number of sexual contacts, comes a higher risk of HIV, thus resulting in a higher HIV-prevalence in the older age groups.
This however, does not necessarily reflect the woman's behaviour, as her sexual partner's lifetime number of sexual contacts plays an important factor to her risk of acquiring HIV. 30,8% of the HIV-positive reported having had only one sexual partner. This could either reflect under-reporting among the women, as suggested in earlier reports (10). It could also be exemplifying the reported increasing HIV-incidence among women with only one sexual partner. This stresses the importance of recommending protective measures even in steady relations, due to the prevalence and traditional cultural acceptance of promiscuity among men.

In the sample as a whole, 71,2% were either cohabiting or married. Marital status proved to be significantly associated with HIV-status; among the HIV-positive 50% of the women were single. This could suggest either that single women conducted high-risk behaviour, and consequently had a higher prevalence of HIV, or that HIV-positive women were more likely to be abandoned by their partner. I will discuss this further in the part concerning disclosure of HIV-result. Cross analysis of marital status and lifetime number of sexual partners showed that single women (85,7% reported more than one) were more likely to having had more than one partner than married (19,1% reported more than one).

A higher proportion of Christians among the HIV-positives was found, whereas the Muslims dominated in the HIV-negative group. Cross-tabulation of religion and number of sexual partners showed a significant correlation (p-value 0,033), the majority (80,0%) of the Muslims reporting only one partner. For Christians, there was an even 53,3/47,7 % distribution of one partner/2 or more.

HIV-positive women reported to have more children than HIV-negatives. This again could be due to increasing age. No matter the cause, this is yet another example of the worrying situation for millions of children, who are at risk of becoming orphans at an early age due to the pandemic.

Level of awareness, knowledge on STI's and how to prevent them, HIV in particular

Even though the level of education was relatively low, the awareness of HIV was high. This is in consistency with earlier findings (1). The majority (80,6%) mentioned HIV when asked to list sexually transmitted infections. This not only reflects the awareness of HIV and AIDS as a disease, but also the knowledge of modes of transmission, which is crucial to the efficacy of preventive campaigns. The remaining respondents, who did not mention HIV spontaneously, had all heard of HIV when asked directly.

Further evaluation of the quality of information confirmed a high knowledge, with 95,5% responding correctly when asked if HIV could be asymptomatic, and if MTCT (Mother to child transmission) could occur. This suggests a higher level of knowledge than in a UN-report from 2002 (1), but a study from 2004 show similar findings (9).

Only 7,5 % of the women knew of no preventive methods, which is reassuring compared to a percentage of 36% in a national demographic survey from 1996. This could reflect the effect of national preventive campaigns conducted since '96. However, since the women, as participants in Msuyas study received counselling, they could have a higher level of knowledge than the population in general.

77,6% knew someone infected by HIV and 43,3% had affected family members. According to Lugalla et al (2004) "AIDS has touched almost every family in Sub-Saharan Africa", so although shocking, this is probably reality to Tanzanians. It is known that knowledge alone is often not enough to cause a behavioural change, for behavioural change to become widespread, encountering infected people in the community makes a strong impact (8). I will discuss this further in the part concerning risk-perception and risk behaviour.

To look for predictors of knowledge, I used having mentioned condom as a preventive method as a parameter. Only "Know HIV has asymptomatic period" proved a significant correlation to increasing knowledge.

Risk-perception and protective behaviour

42,3% of the HIV-negative women reported various degrees of risk perception. 50% did not feel at risk at all. These figures show a lower degree of risk perception than earlier reports suggest (2, 7).

In Tanzania, women comprise 56% of the HIV-positive. In an article by Seip R, (Health Advisor, NORAD), published in Aftenposten 130905, she states that women in general have lack of control regarding their own sexual behaviour, causing the higher female HIV-incidence.

When the women in the sample were asked to state a reason for their risk perception, most answers reflected the husband's behaviour. Those feeling at risk, did so either because they did not trust their husband (89,5%, n=17) or because they were living in a polygamous relationship (10,5%, n=2). Among those not feeling at risk, 44,4% (n=8) did not because they

trusted their husbands to be faithful. Only two women stated their own, low-risk-behaviour as an answer (Has only one partner).

When looking for predictors, increasing age (above 25 years) was found to significantly increase the proportion feeling at risk. No correlation with marital status was found, but only one single was included for cross-analysis. Based on the information from background data, one might with larger samples possibly find a correlation here. The strongest correlation was found to knowing a person infected by HIV. Bowser (2002) argues that this is also what it most powerful when it comes to behavioural change towards non-risk behaviour, and change of community norms (8). So was there a correlation between risk perception and low-risk behaviour?

One hypothesis was that there was a correlation between condom use and risk perception, although condom had not been mentioned when asking for reasons for perceiving risk. One might expect either to see that the "at risk" women had a higher use of condom, it being a consequence of them feeling at risk, or a lower use of condom, making them feel at risk.
In the sample as a whole, 33,9% (n=19) found it difficult to suggest condom use in a stable relation. When cross-analyzing between protective behaviour and feeling at risk of HIV, no significant correlations were found. In the "at-risk group" a higher proportion did mention condom as a protective method (86,4% compared to 69,2% in the no-risk group) and had experience using it (40,9% compared to 23,1% in the no-risk group). So why weren't there any correlations?

As discussed under part one, 30,8% of the HIV-positive reported having had only one sexual partner. Other studies also stress the increasing HIV-incidence among women with only one reported lifetime sexual contact (7).
So is the situation in fact so that the husband's promiscuity is what put the woman at risk, and the women themselves conduct low-risk-behaviour? A study from the Mwanza region (2004) found that among married, men (40 %) were more likely to have a non-spousal sexual partner than the women (3 %) However, when looking into the quality of partnerships reporting, the data suggested that women often underreport whilst men exaggerate the number of sexual partners.

Although women might somewhat be underreporting sexual relations, men seem more likely to be unfaithful. So even though women acknowledge the existing HIV-risk, know of protective methods, and have a wish to conduct low-risk sexual behaviour, behavioural change such as condom use, is still not seen. A high proportion of women find it difficult to even suggest the use of condoms. It may seem like a change of attitude on society level is needed before a woman's claim for safe sex is accepted and respected.

Disclosure of HIV test results: who chooses to disclose or not, why, and what consequences may follow

All women were tested for HIV. 88,1% had chosen to disclose the result, most did it the same day. The women were asked to list who they informed, and for analysis both "informing someone" and "informing partner" was used. A correlation to condom use was found, those who had never used it were more likely to disclose the result. On might think that women using a condom did not feel they had to inform someone, knowing condom protect against

STIs. This is however difficult to conclude based upon this material, due to the fact that no questions were asked regarding the woman's *current* condom use, only if she had *ever* used it.

A significant correlation to HIV-status was found; there was a higher disclosure rate among the HIV negatives. Among the positive, 66,7% disclosed the result. Surprisingly, when looking only at "informing partner", the numbers showed the same tendency, but the correlation, expected to be even stronger, was not even significant. This might however be due to limited number of respondents. In earlier studies, not wanting to worry others and fear of conflict with their partner has been among reasons given to not disclosing a HIV-positive result (11). "It is my secret", one of the women told me, "It wouldn't solve anything" said another. Antelman concluded that seropositive women who chose not to disclose might suffer lack of support and limited ability to engage in preventive behaviour (11) Keeping in mind both the woman's best interest, and the need for informing her partner and other potential partners, one should continue encouraging disclosure.

The percentage of men disclosing was doubled when the woman had disclosed her result (9,1%/21,6%), and although not a statistically strong enough correlation, may suggest that encouraging disclosure of HIV-result, may lead to more people wanting to get tested.

Earlier studies have shown a correlation between break-up of marriages and positive serostatus. In the sample, 53,3% of the HIV-positives were no longer living with the father of the child enrolled in the study. The percentage was slightly higher among the HIV-positive who had informed their partner; 58,3%. Among the HIV-negative only 3,8% were not living together. However, the results do not show *when* they stopped living together (in relation to HIV-result), or if they had even ever been cohabiting. The question "Did you experience any of the following A He left you, B he beat you…. etc" was meant to cover this, but certain experiences during the interviews made me question the liability of the answers, and I have therefore excluded it in the analysis. Therefore, one can only conclude that women with a positive serostatus are more likely to not be living with the father of the child.
As discussed earlier (under demographics), marital status and HIV-status also has a strong association, among the HIV-positive 50% of the women were single. Again, since neither the relation to the father of the child, nor the time of break-up of a possibly existing relation was recorded, one can only conclude that single women have a higher HIV-prevalence.

Sources of error and lessons learned…

Women were interviewed in Kiswahili language. I conducted the interviews, in most cases accompanied by a local nurse. Due to my limited knowledge of Kiswahili, and the nurse's limited knowledge of English, language did pose a significant barrier.
The nurse's assistance during interviews came in *addition* to their everyday work, and lack of time caused some interviews to be conducted in a somewhat hurried manner.
We should maybe have spent more time with the nurses before the interviews in order to make sure we had a mutual understanding of each question and how it was to be asked. I had various nurses assisting me, which could also impair continuity.
The structured questions were more reliable, and analysis is therefore mainly built on answers to these.

Interviews took place when the women came to the health clinics for follow-up. At one of the health clinics, the room available for interviews was an open, approximately 160 square

metres sized room. All women arriving entered the room, and sat waiting at benches. Even though a certain degree of privacy was attempted, by interviewing in the opposite side of the room, answers to some of the questions of a more private character may have been influenced by the presence of so many others in the room.

The fact that I, conducting the interviews, was a foreigner in the community may have had an implication on the answers given.

The women interviewed were all participants in a study by S. Msuya. As part of the study, they had received counselling, which may cause higher levels of knowledge in the sample than the average. All the same, I consider the sample to be representative.

For some analysis, a higher number of participants would have been desirable. The questionnaire contained questions regarding various other aspects to be investigated, but the limited extent of this elective did not allow me to expand on further subjects. If I was to make the questionnaire again, I would have limited the number of topics, while improving the quality and accuracy of the questions in the sections kept. Especially in the "Disclosure"-section, I came up with several questions I wished I had asked, while analysing.

Conclusion

- Level of awareness and knowledge of HIV is high
- Less than half of the women perceive themselves at risk of being infected HIV. Even among those feeling at risk, behavioural change, such as condom use, is still not seen. A high proportion of women find it difficult to even suggest the use of condoms.
- Disclosure rates are high, but seropositive women are less likely to disclose their HIV-status.
- HIV-positives report a higher number of lifetime sexual partners, and have more children than HIV-negatives. Positive HIV-serostatus and increasing age is associated. HIV-positives were more likely to be single, and not living with the father of the child enrolled in the study.

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APPENDIX: Questionnaire

Before the interview

- Sia ID number _____
- Hege ID number _____
- HIV-status (circle alternative) 1. Positive 2. Negative

PART 1: BACKGROUND

Demographics

*1 Age of the mother *(Umi wa mama) Una umri gani?* _____ years *miaka*

2 Education *(Kiwango cha elimu) Ume soma mpaka darasa la ngapi?*

Primary school (7 ys, age 7-14) 1 2 3 4 5 6 7
Elimu ya msingi
Secondary school (4 ys, age 15-19) 1 2 3 4
Kidato 1-4
Secondary high school (2 ys, age 19-21) 5 6
Kidato cha 5-6
Higher education (college, university, max 5 ys) 1 2 3 4 5
Elimu ya juu (chu o cha diploma au digrii)

*3 Work *(Kazi ya mama) Una kazi gani?*:_____

4 What is your monthly income? *Je kipato chako cha mwezi ni kiasi gani?*

.1 none *sina* .2 <5 000 TSH .3 5 000-10 000 TSH .4 10 000-15 000 TSH .5 >15 000 TSH

5 Who do you live together with? *Je unaishi na*

.1 Husband and children only *Mume/baba watoto na watoto tuu*
.2 Husband, children and family in law *Mume/baba, watoto na ndugu wa mume/baba*
.3 Husband, children and own family *Mume/baba, watoto na ndugu wa mama*
.4 Other *nyingine, taya*:_____

*6 Religion (circle alternative) *Dini yako*

.1 none *sina*
.2 Christian *mkristu*
.3 Muslim *mwislamu*
.4 traditional *dini ya asili*
.5 other *nyingine, taya*:_____

*7 Economical status Econimic status:

A) Material possessions:

Do you possess any of the following *(Je una vitu vifuatavyo nyumbani)*
.1 radio *redio*
.2 bike *baiskeli*
.3 car *gari*
.4 fridge *fridji*
.5 telephone *simu*
.6 TV *television*

B) Do you have electricity at home? *Je mne umeme nyumbani?*.1 Yes *ndiyo*.2 No *hapana*

C) Do you (and your partner) own the house you live in, or do you rent?
Je nyumba unayoishi ni yakwenu au umepanga?
.1 We own it *Ni ya kwetu* .2 We rent it *tumepanga*

8 Marital status *Wewe na mumewako mmefunga ndoa?*

.1 single *sijaolewa*
.2 cohabiting *tunaishi pamoja bila ndoa*
.3 married *nimeolewa*
.1 If married, is the current husband husband number (circle alternative):
Kama umeolewa, huyu ni mumewako wa ngapi?

9 Duration of the relationship *Mmeishi pamoja kwa muda gani*: _____years *miaka*____months *miezi*

10 Lifetime number of partners (circle alternative) *Ulishawahi kuwa na wapenzi wa ngapi?*

1 2 3 4 5 6 7 8 >8

11 Number of living children *Je una jumla ya watoto wangapi walio hai?:* _____

12 Age of the child enrolled in this study *Huyu mtoto, ana umri gani?:* _____ months *miezi*

PART TWO: KNOWLEDGE

Knowledge-spontaneous mention of HIV/AIDS

(for question number 13 and 14, do not list the alternatives, the spontaneous answer is the goal)
(kwa swali ya namba 13 n 14, usidose andika tu yale majibu yote mama atakyoyotaja)

13 Do you know of any STD's (sexually transmitted diseases)

Unaweza ukanitajia magonjwa yanayotokana na kujamiiana (ngono)

.1 HIV/AIDS *UKIMWI*
.2 genital ulcer *vidonda sehemu za siri*
.3 genital herpes *herpes*
.4 gonorrhoea *kisonono*
.5 syphilis *kaswende*
.6 chancroid *pangusa*
.7 klamydia *klamydia*
.8 trikomoniasis *trikomona*
.9 other *mengine:*_____

14 Do you know of any specific ways to avoid STD's?

Je unajua njia za kujikinga na maginjwa ya zinaa?

.1 don't know any *sijui*
.2 consistent condom use *kutumia kondom kila wakati wa kujamiiana*
.3 having only one sex partner *kuwa na mpenzi mmoja, muaminifu*
.4 avoiding sex with prostitutes *kuacha kufanya mapenzi na watu wa nje kama "machanguudoa"*
.5 abstinence from sex *kuacha kufnya mapenzi kabisa*
.6 other *nyingine, taya:*_____

Knowledge –specific knowledge about HIV/AIDS

15 For those not mentioned HIV/AIDS spontaneously: Have you ever heard of HIV/AIDS?

Je umeshawahi kusika ugonjwa wa ukimwi? .1 Yes ndiyo .2 No hapana

16 Do you… *Je unafahamu…*

A) …know of anybody who is infected/has died from HIV/AIDS?
… *mtu yeyote ambaye ameathirika/kufa kwa ajili ya UKIMWI* .1 Yes *ndiyo* .2 No *hapana*
B) …have any close family member (parents, siblings, children uncles, aunts, grandparents) who is infected/has died from HIV/AIDS?
Umeshawahi kupata ndugu wa karibu ambaye ameathirika au kufa kutokana na UKIMWI (wazazi: kaka/dada, watoto, wajomba, shangazi, baba wakubwa au wadogo, bibi/babu)
.1 Yes *ndiyo* .2 No *hapana*

If yes, who? *Ndiyo, nani?*_____

17 If you have heard of HIV/AIDS, where did you get the information from?(several options possible)
Kama ametaja UKIMWI, je aliujua kupitia njia ipi/zipi? (Tiki zote atakazotaja)

.1 Radio *redio*
.2 newspapers/magazines *gatezi/magazetini*
.3 Television *television*
.4 parents *wazazi*
.5 partner *mume*
.6 friends *marafiki*
.7 school *schuleni*
.8 clinic/health workers *kliniki/wataakamu wa afya*
.9 pamphlets/posters *vipeperushi/posters*
.10 other *nyingine, taja*:_____

18 Do you think a person can look healthy and be infected with HIV/have AIDS?
Je mtu anaweza kuwa na afya nzuri na huku ameathirika na virusi vya UMIMWI?

.1 Yes *ndiyo* 2 No *hapana* .3 Don't know *sijui*

19 Do you think an HIV-positive mother can pass HIV on to her baby during pregnancy/birth/breastfeeding?
Je unafikiri mama aliyeathirika na virusi vya UKIMWI anaweza kumuambukiza mtoto wakati wa ujauzito/kujifungua au wakati akinyonyesha?

.1 Yes *ndiyo* 2 No *hapana* .3 Don't know *sijui*

20 HIV-negatives only: Do you think you are at risk of getting HIV/AIDS?
Je unadhani uko kwenye hatari ya kuambukizwa/kupata ugonjwa wa UKIMWI? (andika sababu)

.1 NO, no risk at all, reasons: _____
Hapana, siko kwenye hatari _____
.2 YES, small risk, reasons: _____
Ndiyo, niko kwenye hatari kidogo _____
.3 YES, moderate risk, reasons: _____
Ndiyo, niko kwenye hatari kiasi _____
.4 YES, great risk, reasons: _____
Ndiyo, niko kwenye hatari sana _____

PART 3: DISCLOSURE, CONTRACEPTIVE USE AND REPRODUCTIVE BEHAVIOUR

HIV-results and disclosure

21 For how long have you known your HIV-status? _____ months
Je umejua majibu yako ya kipimo cha UKIMWI kwa moda gani sasa miezi?_____

22 Have you informed anybody about your HIV-test results?
Je umeshamueleza mtu yeyote kuhusu majibu yako ya kipimo cha UKIMWI?
.1 NO, why? Hapana, kwa nini hujamuleza mtu yeyote?

_____
_____

.2 YES, who? *Ndiyo, nani?*

.1 Partner *mume/mwenzi*
.2 mother *mama yako mzazi*
.3 friend *marafiki*
.4 other, specify *wengine, taja:*_____

23 How long did it take you to inform that/those person(s) (time since knowing the status yourself)
Je ulichikua muda gani tangu upimwe hadi ulipomueleza/waleza
_____ months *miezi*

24 What was the reaction of your partner (do not prompt the alternatives)

Je mume/mwenzi alifanyaje ulipomweleza majibu yako? (usidoze andika tu yale majibu yote mama atakayoyotaja)

.1 indifferent *hakufanya kitu*
.2 relief *alifurahi*
.3 support *alini*
.4 denial *aliyakataa majibu*
.5 anger *alikasirika*
.6 suspicion/accusation *alinishuku nina wapenzi wa nje*
.7 sadness *alisikitika*
.8 humiliation *alisikia/aliona ni aibu kuwa na UKIMWI*
.9 other *nyinginezo:*_____

*Further decription of the reaction Elezea kwa kirefu aliechofanya:*_____
_____
_____
_____
_____

25 Did you experience any of the following when you informed your partner about the results

Je mume mwenzi alifnyaje ulipomueleza majibu yako?

.1 He was angry because you decided to get tested *Alikasirika sababu umeamuma kupima*
.2 he started a fight *Alikugombeza kuleta ugomvi*
.3 he beat you *Alikupiga*
.4 he left you *Amekuacha sababu ya kupima*
.5 other *Nyinginezo:*_____
_____

26 Has your partner come for testing? *Je mume/mwenzi wako naye ameshkuja kupima?*

.1 YES *ndiyo*
.2 NO, why? *Hapana, kwa nini?* _____
_____

26 Are you still living with the father of the current child/chil enrolled in this study?

Je bado unaishi na baba wa mtoto wako au mmetengana baada ya kujifungua?

.1 YES *ndiyo*
.2 NO, why? *Hapana, kwa nini?* _____
_____

Contraceptive use/condoms

28 Have you ever used any kind of contraceptives?

Je umeshawahi kutumia njia yoyote ya uzazi wa majira/mpango?

.1 NO *hapana*
.2 YES, specify *ndiyo, taja:*_____

29 Have you ever used a condom? Je umeshawahi kutumia kondomu?

.1 NO *hapana*
.2 YES, with whom *ndiyo, na nani au wakati gani*

.1 premarital *kabl ya ndoa*
.2 husband/current partner *na mume/mwenzi wa sasa*
.3 extramarital *na wapenzi wa nje*

30 Has knowing your HIV-status made you change your sexual behaviour*? Ulipopata majibu yako ya kipimo cha UKIMWI, je imefanya ubadili tabia au mwenedo wako?*

.1 NO *hapana*

.2 YES, how *ndiyo, kwa vipi?*

.2 use condom *kutumia kondom kila wakati wa kujamijana*

.3 having only one sex partner *kuwa na mpenzi mmoja, muaminifu*

.4 avoiding sex with prostitutes *kuacha kufanya mapenzi na watu wa nje kama "machanguudoa"*

.5 abstinence from sex *kuacha kufnya mapenzi kabisa*

.6 other *nyingine, taya:*_____

Further decription *Malezo ya zaidi:*_____

_____

_____

31 Do you find it difficult to… Je unaona kuna ugumu

A) … introduce/suggest the use of condoms in a stable relation?

Kumwambia mwenzi kuhusu kutumia kondomu hasa kwa watu wenye ndoa/wanoishi pamoja?

.1 YES, why? *Ndiyo, kwa nini?* _____

_____

.2 NO, why? *Hapana, kwa nini?* _____

_____

B)… introduce/suggest the use of condoms in a casual relation

Kumwambia mwanaume atumie kondomu kama ni wa nje ya ndoa au mnakutana mara moja? (casual affair)

.1 YES, why? *Ndiyo, kwa nini?* _____

_____

.2 NO, why? *Hapana, kwa nini?* _____

_____

Family planning/reproductive behaviour

32 Do you want to have more children? *Je bado unataka watoto wengine baada ya huyu wa sasa?*

.1 YES, why? *Ndiyo, kwa nini?* _____

_____

.2 NO, why? *Hapana, kwa nini?* _____

_____

.3 Don't know *Sijui*

33 Has knowing your HIV-status influenced you on this decision?

Je majibu yako ya UKIMWI yamechangia katika maamuzi hayo ya swali la 32?

.1 YES, why? *Ndiyo, kwa nini?* _____

_____

.2 NO, why? *Hapana, kwa nini?* _____

_____

.3 Don't know *Sijui*

34 Does your husband want to have more children?

Je mume/baba watoto wako anataka watoto wengine?

.1 YES, why? *Ndiyo, kwa nini?* _____

_____

.2 NO, why? *Hapana, kwa nini?* _____

_____

.3 Don't know *Sijui*

35 Does your husband know your HIV-status? Je mume/baba watoto wengine anajua majibu yako ya UKIMWI?

A) No, not applicable

B) YES, do you think knowing it has influenced him/changed his decision on having more children? Unadhani majibu hayo yamefanya/yamechangia katika maamuzi yake ya kuwa na watoto zaidi?

.1 NO *hapana*

.2 YES, specify *ndiyo,elezea:*_____

.3 Don't know *sijui*

For HIV-positives only, explore the role the HIV-status plays in their lives

Kwa wale walio positive

36 Do you think knowing that you are HIV-positive has made a big change in your life? Explain hiw:

Je unadhani kujijua una UKIMWI, kumeathiri au kumeleta mabadiliko makubwa katika maisha yako? Elezea: